

VIA Email to Clerks@durham.ca

October 30, 2024

Works Committee Chair Dave Barton and Works Committee Members
Regional Municipality of Durham
605 Rossland Road East
Whitby, ON

Dear Chair Barton and Works Committee Members,

I am writing to you to provide some information to you regarding air emissions monitoring that is not only available and encouraged by scientific bodies and governments to enhance protection of the environment and public health, but which is also being required by various countries, states and local governments, for incineration facilities in other jurisdictions, including Europe and the United States. In this letter, I focus on recent updated European monitoring documents.

I send this information to you in advance of the expected DYEC update report, which will include monitoring considerations, to help provide context and information to you as decision makers. So far, I have not seen this information provided to you by staff nor by Covanta (who have are now named Reworld).

The information below provides evidence that the DYEC monitoring has not been keeping up with the science nor with the actions around monitoring and reporting in other jurisdictions.

All of this information must also be considered together with the information that have been provided to you in numerous delegations about performance, monitoring and reporting concerns with the DYEC.

These concerns include the dioxin/furan exceedances in the stack and in the ambient air, the complete lack of transparency around dioxin/furan AMESA monitoring with years of withheld AMESA results and underlying reports and many months of withheld and invalidated AMESA data, as well as elevated dioxin/furan soil testing results. There is an obvious pattern here and dioxin and furan concerns are mounting. Better, more comprehensive and frequent monitoring and reporting is needed to address these concerns.

Bottom line - the status quo monitoring and reporting is not enough to protect the public and the environment and the citizens of Durham, particularly those in Clarington and Oshawa who are most directly impacted by the incinerator emissions. Incineration comes with many risks and adverse environmental impacts. Citizens must have and deserve the best monitoring and

reporting available that is keeping step with the science. Will you and would you accept anything less for Durham citizens?

Monitoring in Europe

Durham committed many years ago that the incinerator would meet or exceed European Union (EU) monitoring and measurement standards.

Please see the October 30th correspondence that Linda Gasser sent to you which provides a detailed account including the exact wording of the Durham resolutions.

The European Commission (EC) adopted its Best Available Techniques (BAT) Conclusions on November 12, 2019. You can find the decision and the full BAT Conclusions at:

https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.L_.2019.312.01.0055.01.ENG&toc=OJ%3AL%3A2019%3A312%3ATOC

It is important to note that in the decision the EC states:

“Best available techniques (BAT) conclusions are the reference for setting permit conditions for installations covered by Chapter II of Directive 2010/75/EU and competent authorities should set emission limit values which ensure that, under normal operating conditions, emissions do not exceed the emission levels associated with the best available techniques as laid down in the BAT conclusions.” (emphasis added)

In other words, the BAT Conclusions are not just what is technically achievable, but indeed are the reference for setting permit conditions and emission limits for the EU member states.

Scroll down to the fourth BAT conclusion (BAT 4) and you will find that one lays out the frequency emissions are to be tested, and whether a pollutant will be monitored continuously, periodically (infrequent stack tests) or by long-term sampling. It states:

“BAT 4. BAT is to monitor channelled emissions to air with at least the frequency given below and in accordance with EN standards. If EN standards are not available, BAT is to use ISO, national or other international standards that ensure the provision of data of an equivalent scientific quality.” (emphasis added)

Scroll down further in the BAT Conclusions and you will find the table containing a list of pollutants and minimum frequency for testing. I have copied parts of that table below to show

examples of where the DYEC monitoring falls short of the EC monitoring and have added some explanations.

Examples where DYEC does not meet the European BAT requirements include highlighted

sections below: Note the first five columns are excerpts from the BAT Conclusions (see pages 14, 15 of 51 paged document). The stand-alone column on the right was created to show how current monitoring at the DYEC is different for these pollutants. Definitions for Dust and other pollutants are taken directly from the BAT conclusions.

Substance/ Parameter	Process	Standard(s) ⁽⁴⁾	Minimum monitoring frequency ⁽⁵⁾	Monitoring associated with	DYEC Monitoring
Dust (defined as Total particulate matter (in air))	Bottom ash treatment	EN 13284-1	Once every year	BAT 26	Durham does NOT continuously monitor Particulate Matter (instead uses crude substitute Opacity)
	Incineration of waste	Generic EN standards and EN 13284-2	Continuous	BAT 25	
Hg	Incineration of waste	Generic EN standards and EN 14884	Continuous ⁽⁸⁾	BAT 31	DYEC does NOT continuously monitor Mercury instead has two stack tests totaling 18 hours/yr)
TVOC	Incineration of waste	Generic EN standards	Continuous	BAT 30	No continuous monitoring of Total Volatile Organic Compounds; DYEC monitors organic matter
PBDD/F	Incineration of waste ⁽⁹⁾	No EN standard available	Once every six months	BAT 30	Polybrominated dioxins/furans are NOT monitored at the DYEC at all

Substance/ Parameter	Process	Standard(s) ⁽⁴⁾	Minimum monitoring frequency ⁽⁵⁾	Monitoring associated with	DYEC Monitoring
PCDD/F (Chlorinated Dioxins/Furans)	Incineration of waste	EN 1948-1, EN 1948-2, EN 1948-3	Once every six months for short-term sampling	BAT 30	Durham needs to check if reference standards used in Durham are as stringent as Europe including sampling and recovery procedures during source tests.
		No EN standard available for long-term sampling, EN 1948-2, EN 1948-3	Once every month for long-term sampling ⁽¹⁰⁾	BAT 30	
Dioxin-like PCBs	Incineration of waste	EN 1948-1, EN 1948-2, EN 1948-4	Once every six months for short-term sampling ⁽¹¹⁾	BAT 30	To my knowledge, judging what was provided in Durham 2021-WR-10, the DYEC does NOT include monitoring of dioxin-like PCBs in using long-term sampling. Only chlorinated Dioxins and Furans are collected/analyzed.
		No EN standard available for long-term sampling, EN 1948-2, EN 1948-4	Once every month for long-term sampling ^{(10) (11)}	BAT 30	

European Commission Conclusion BAT 5 is regarding conducting dioxin/furan emissions testing during OTHER THAN NORMAL OPERATING CONDITIONS (OTNOC). Presently Durham is relying on only two – 12-hour duration stack tests per year for its source testing of dioxins and furans and the testing is conducted only during normal steady state operating conditions. It is simply not adequate. BAT 5 is extremely pertinent to the situation we have in Durham given the mounting evidence of dioxin furan exceedances and source testing problems. I have copied BAT 5 in full here (emphasis added):

BAT 5. BAT is to appropriately monitor channelled emissions to air from the incineration plant during OTNOC.

Description

The monitoring can be carried out by direct emission measurements (e.g. for the pollutants that are monitored continuously) or by monitoring of surrogate parameters if this proves to be of equivalent or better scientific quality than direct emission measurements. Emissions during start-up and shutdown while no waste is being incinerated, including emissions of PCDD/F, are estimated based on measurement campaigns, e.g. every three years, carried out during planned start-up/shutdown operations.

In addition to the above, the BAT Conclusions also provide detailed descriptions of best operating techniques and practices, as well as BAT-associated emission levels (BAT-AELs) for channelled emissions to air. The BAT-AELs as well as the BAT emission control techniques should be checked against the what is employed at the DYEC and what emission limits are required in the present DYEC Environmental Compliance Approval (ECA) as well as those set in the United States to see how Durham compares.

Comparing stack results against outdated emission limits does not protect us. Your Committee needs a full report comparing our requirements against the BAT-AELs.

It is notable as well that the BAT Conclusions also set BAT-AELs for long-term sampling of dioxins and furans. Here I have copied the table directly from the document.

BAT-associated emission levels (BAT-AELs) for channelled emissions to air of TVOC, PCDD/F and dioxin-like PCBs from the incineration of waste

Parameter	Unit	BAT-AEL		Averaging period
		New plant	Existing plant	
TVOC	mg/Nm ³	< 3–10	< 3–10	Daily average
PCDD/F ⁽²⁹⁾	ng I-TEQ/Nm ³	< 0,01–0,04	< 0,01–0,06	Average over the sampling period
		< 0,01–0,06	< 0,01–0,08	Long-term sampling period ⁽³⁰⁾
PCDD/F + dioxin-like PCBs ⁽²⁹⁾	ng WHO-TEQ/Nm ³	< 0,01–0,06	< 0,01–0,08	Average over the sampling period
		< 0,01–0,08	< 0,01–0,1	Long-term sampling period ⁽³⁰⁾

Staff should also provide to you information that compares the DYEC against the ash testing techniques and monitoring parameters set out in the BAT Conclusions.

I conclude by stating that I have just been able to detail some of what has been set out in the European BAT Conclusions, but there is much more from other documents and from other jurisdictions (including Oregon – see Linda Gasser’s correspondence) that shows the DYEC monitoring is not keeping up.

You need all such information and comparisons to make an informed decision.

Thank you for your attention,

Wendy Bracken